

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 58-100419
(43)Date of publication of application : 15.06.1983

(51)Int.Cl. H01L 21/20
H01L 21/26

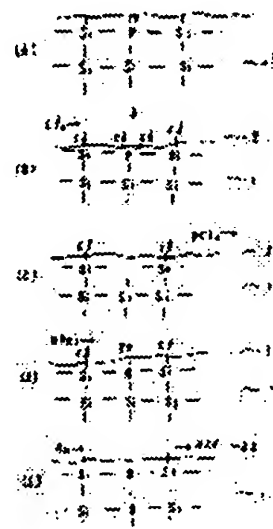
(21)Application number : 56-199020 (71)Applicant : SEIKO EPSON CORP
(22)Date of filing : 10.12.1981 (72)Inventor : IWAMATSU SEIICHI

(54) PARTIAL ATOMIC LAYER EPITAXIAL METHOD

(57)Abstract:

PURPOSE: To permit growth of an epitaxial layer of a partial atomic layer by a method wherein atoms or molecules are partially adsorbed on the surface of a substrate so that a part of atoms or molecular-constituting atoms is coupled to the substrate surface.

CONSTITUTION: The surface of an Si substrate 1 containing P is cleaned through plasma in an Ar vacuum container, and chlorine gas is passed to form a Cl adsorption layer 2 on the surface of the substrate 1 at the room temperature. Then, the substrate 1 is heated up to about 100° C, so that only P atoms are converted to PCl_3 and evaporated. By passing BBr_3 at the room temperature in that state, B forms an adsorption layer 3 together with Br in positions where P atoms have been removed from the surface of the substrate 1. Then, by passing hydrogen on the substrate 1 at the room temperature, Cl, Br, etc. are converted to HCl, HBr, etc. and removed, whereby P atoms are replaced by B atoms which are buried in position where P atoms have existed.



LEGAL STATUS

[Date of request for examination]
[Date of sending the examiner's decision of rejection]
[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]
[Date of final disposal for application]
[Patent number]
[Date of registration]
[Number of appeal against examiner's decision of rejection]
[Date of requesting appeal against examiner's decision of rejection]
[Date of extinction of right]